

MODEL 310 TYPE 5 HAND-SIZED VOM

TT TRIPLETT
A *penril* COMPANY
INSTRUCTION MANUAL

Instruction Manual



Triplett

Model 310 Type 5

Hand-Size VOM

Triplett Corporation

One Triplett Drive

Bluffton, Ohio 45817

SAFETY RULES

WARNING

This tester has been designed with your safety in mind. However, no design can completely protect against incorrect use. Electrical circuits can be dangerous and/or lethal when lack of caution or poor safety practices are used.

READ THE MANUAL

Read this Instruction Manual carefully and completely.

Voltages and currents within the capability of this test equipment can be hazardous. Follow the instructions in this manual for every measurement. Read and understand the general instructions before attempting to use this tester. Do not exceed the limits of the tester.

SAFETY CHECK

Double check the switch setting and lead connections before making measurements. Are you following all of the instructions?

Disconnect the tester or turn off the power before changing switch positions.

Do not connect to circuits with voltage present when switch is in any ohms or current position.

When replacing fuses use only specified type fuses and insert in correct fuse holder.

DON'T TOUCH

Don't touch exposed wiring, connections or other "live" parts of an electrical circuit. If in doubt, check the circuit first for voltage before touching it.

Turn off the power to a circuit before connecting test probes to it. Be sure there is no voltage present before you touch the circuit.

Do not use cracked or broken test leads.

HIGH VOLTAGE IS DANGEROUS

Always start with the power off. Be sure there is no voltage present before making connections to the circuit.

Don't touch the tester, its test leads, or any part of the circuit while it is on.

Before disconnecting the tester, turn the circuit off and wait for the meter to return to "zero."

DISTRIBUTION CIRCUITS PACK A PUNCH

In high energy circuits such as distribution transformers and bus bars, dangerous arcs of explosive nature can occur if the circuit is shorted. If the tester is connected across a high energy circuit when set to a low resistance range, a current range, or any other low impedance range, the circuit is virtually shorted.

Special equipment designed for use with these circuits is available. Contact a qualified person for assistance before attempting to make measurements on any high energy circuit.

SAFETY IS NO ACCIDENT

W A R N I N G

**REMOVE CLAMP-ON AC AMMETER
ADAPTER FROM TESTER WHEN
MEASURING VOLTAGE**

Table of Contents

	Page
Specifications	5
Introduction	7
General Instructions	8
DC Voltage Measurements	12
AC Voltage Measurements	14
Accessories Available	16
Operation Chart	17
Resistance Measurements	18
DC Current Measurements	20
Measuring Output Volts (dB)	22
Maintenance	24
Circuit Diagram	25
Component Location	26
Replaceable Parts	27
Model 10 Instructions	30
Model 101 Instructions	37
Limited Warranty	42

DC Volts

Ranges:

0-3, 12, 60, 300, 1200 (20,000 ohms per volt)

Accuracy:

 $\pm 3\%$ of full scale value

AC Volts

Ranges:

0-3, 12, 60, 300, 1200 (5,000 ohms per volt)

Accuracy:

 $\pm 4\%$ of full scale value (on 60 Hz sine wave at 77°F)

Ohms

Ranges:

0-20,000, 200,000, 2 Meg., 20 Meg.

Accuracy:

 $\pm 3\%$ of DC scale length with fully charged battery

Ohmmeter Specifications

	Range			
	X1	X10	X100	X1K
Max. Voltage (Volts)	1.6	1.6	1.6	18.0
Max. Current (mA)	8.0	.8	.08	.09
Max. Power (mW)	3.2	.32	.032	.605

6 SPECIFICATIONS (Cont'd.)

DC Milliamperes

Ranges:

0-.6, 6, 60, 600

Accuracy:

$\pm 3\%$ of full scale value

Current Range	Approximate Full Scale Voltage Drop
0-.6, 6, 60 mA	250 mV
0-600 mA	330 mV

Meter

50 μ A — 250 mV (Pivot and Jewel)

Overload Protection

Meter movement protected by diode module.

RX1 range protected by fuse.

Voltage ranges protected by high impedance.

Batteries

One 1.5 volt "N" size (NEDA 910)

One 15 volt Eveready 504 (NEDA 220)

Weight

Approximately 14 oz.

Accessories supplied with the Model 310

1. One red and one black test lead
2. Alligator clips
3. Batteries: 1 — 1.5 V; and 1 — 15 V
4. Instruction Manual

The Triplett Model 310 is a handy hand-sized VOM with all the versatility and performance of larger more expensive bench-size models. It offers diode overload protection against damage to the meter movement caused by accidental overloads. A fuse is used to protect the RX1 range. The fuse and batteries can be easily replaced by removing a cover on the back. Its rugged, self-shielded, high torque bar-ring meter movement incorporating springback jewels provides dependable measurement capabilities on the job anywhere, even in strong magnetic fields. Small enough to be carried in your tool box, glove compartment, brief case, or shirt pocket, the Model 310 allows you to have 20,000 ohms per volt DC sensitivity (5,000 Ω/V AC) wherever you need it.

Versatility and readability have not been sacrificed in order to provide a portable VOM. The 310 offers 18 different ranges that can all be easily read on only 3 clearly defined scale arcs. A single selector switch allows you to switch easily from range-to-range and function-to-function.

Parts Replacement

Parts available for replacement are listed in the parts list. When replacing any parts, be careful to not disturb or damage any others. Do not overheat resistors or diodes, but be sure to make a good solder connection.

In some cases, it is wise to leave part of the lead from the old component and solder the new component to the old lead to prevent damage to surrounding components.

If there is evidence of smoke or an electrical arc inside the VOM, return the VOM to the factory or an authorized service center. There is a chance of hidden damage that could cause another failure in the VOM.

Calibration

With normal use, readjustment of this VOM should not be necessary. Replacement parts are designed to be installed without any need for recalibration of the VOM. An occasional check of the VOM against a known reference voltage or another VOM is good practice. If there is a question about the accuracy of the VOM, it should be returned to the factory or an authorized service center for a calibration check.

Repair or Service

For repair of the VOM, return it to the factory or an authorized service center. To help in repairing the VOM, give a detailed description of the problem and any other data that might be helpful such as what kind of circuit was being measured when the problem was discovered.

If the VOM is damaged by an overload and there is evidence of smoke or an electrical arc inside, return it to the factory or an authorized service center for inspection and repair. There could be some hidden damage that would cause a future failure of the VOM.

Test Leads

Check the test leads periodically. Leads that are worn, have damaged insulation, damaged plugs, damaged probes or loose parts should be replaced.

The following section should be read carefully; it contains instructions and precautions to be observed in making measurements with the tester.

The alligator clips provided with the tester fit over the end of the test probes. When measuring high voltage, these alligator clips allow measurement without handling the test probes. **ALWAYS SHUT OFF THE POWER** source before attempting to connect alligator clips.

10 GENERAL INSTRUCTIONS (Cont'd.)

When the approximate value of the quantity being measured is not known, **ALWAYS START ON THE HIGHEST RANGE.** For greater accuracy, choose the range which will allow readings to be taken in the upper (right hand) portion of the scale.

Readings are taken on the scale having the appropriate significant figures (both 3 and 300 volts are read on the 0-300 scale) by multiplying or dividing by a factor of 10 or 100 as indicated by the range/scale ratio (i.e.; on the 3 volt range divide the scale readings by 100).

The test probes should be disconnected from the voltage source (or the source shut off) before the switch position is changed. This practice will result in an increased life and reliability for the tester as well as a good safety practice.

The Meter Zero Adjust Screw is located near the center of the tester. It should be periodically adjusted so the meter pointer is on zero with no input into the tester.

Readings on the sensitive voltage, current and resistance ranges may sometimes be different than calculated values. Thermo-electric or electro-chemical reactions can sometimes generate voltage (and current) in a circuit due to elevated temperatures for soldering, contact

GENERAL INSTRUCTIONS (Cont'd.) 11

of dissimilar metals, chemical fumes or moisture. Also, the fingers should never touch the metal parts of the test probes since body resistance can cause erroneous readings — particularly on the high ohmmeter ranges.

Care:

Although this instrument is portable and rugged it should be treated with care. Do not drop it or handle it roughly.

Avoid placing it on a bench where machine tools are used or severe vibration is encountered.

When possible keep it in a place of moderate temperature. Avoid subjecting it to extreme temperatures and severe temperature changes.

If the tester has not been used for a long period of time, rotate the switch in both directions several times to wipe the switch contacts for good contact.

12 DC VOLTAGE MEASUREMENTS

0-3 thru 0-300 Volts:

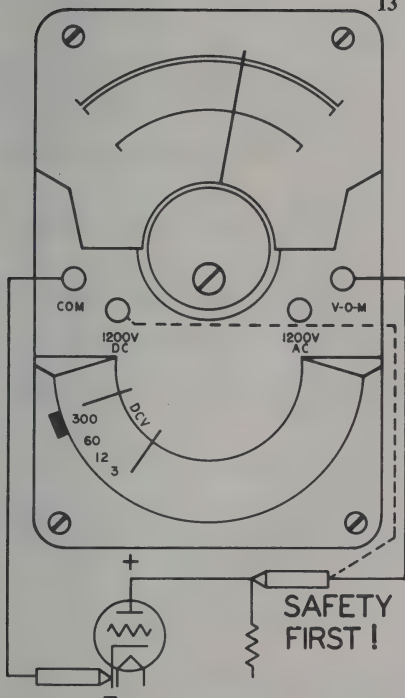
1. Insert test leads in VOM and COM jacks.
2. Set switch to appropriate DCV range.
3. Connect probes across voltage to be measured.
4. Read voltage on the black AC-DC scale.

0-1200 Volts:

1. Insert test leads in COM and 1200 VDC jacks.
2. Set switch to 3 DCV position.
3. Connect probes across voltage to be measured.
4. Read voltage on the black AC-DC scale.

DO NOT TOUCH THE VOM while it is connected to high voltage!

BE CAREFUL around high voltage!



14 AC VOLTAGE MEASUREMENTS

0-3 thru 0-300 Volts:

1. Insert test leads in VOM and COM jacks.
2. Set switch to appropriate ACV range.
3. Connect probes across voltage to be measured.
4. Read voltage on black AC-DC scale.

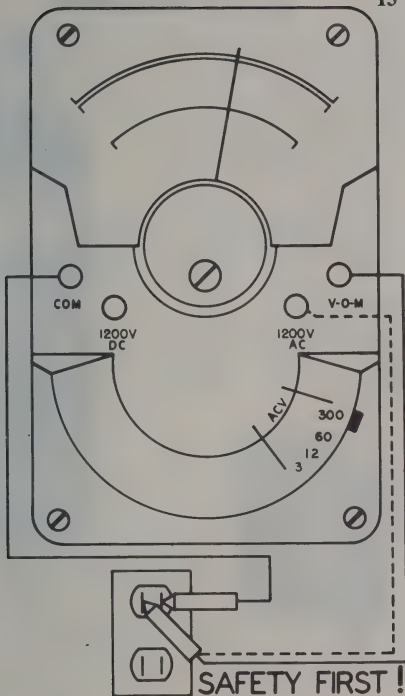
0-1200 Volts:

1. Insert test leads in COM and 1200 VAC jacks.
2. Set switch to 3 ACV.
3. Connect probes across voltage to be measured.
4. Read voltage on black AC-DC scale.

DO NOT TOUCH THE VOM while it is connected to high voltage!

BE CAREFUL around high voltage!

NOTE: For AC Amps measurements with the Model 10, disconnect the test leads. The range switch should be set to 3 ACV.



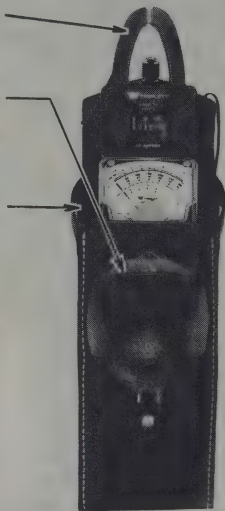
Model 10 Clamp-on AC Am-
meter — Cat. No. 60-211

Ranges, 0-6-12-30-60-120-300

Model 101 Line Separator —
Cat. No. 60-218 — Divides two
conductor cords direct or in-
creases Model 10 sensitivity 10x
and 20x.

Model 379 Carrying Case —
Cat. No. 10-1456 For Model 310
and Model 10 combination, plus
Model 101.

Model 311 Lead — Cat. No.
79-416 42" long lead to separate
Model 10 from 310 unit for easy
reading in awkward spots. (not
shown)



Model 369 Carrying Case —
Cat. No. 10-1258.

OPERATION CHART

17

To Measure	Set Switch To	Lead Connections Black Lead "COM" Red Lead Listed Below	Read on Scale	Each Scale Div. Equals
DC Volts 0-3 0-12 0-60 0-300 0-1200	DCV 3 DCV 12 DCV 60 DCV 300 DCV 3	V-O-M V-O-M V-O-M V-O-M 1200 V DC	300 ÷ 100 12 60 300 12x100	.05 Volt .20 Volt 1 Volt 5 Volt 20 Volt
AC Volts 0-3 0-12 0-60 0-300 0-1200	ACV 3 ACV 12 ACV 60 ACV 300 ACV 3	V-O-M V-O-M V-O-M V-O-M 1200 V AC	30 AC Amps ÷ 10 12 60 300 12x100	.05 Volt .20 Volt 1 Volt 5 Volt 20 Volt
OHMS 0-20,000 0-200,000 0-2 Meg. 0-20 Meg.	Ω X1 Ω X10 Ω X100 Ω X1K	V-O-M V-O-M V-O-M V-O-M	0-20K 0-20Kx10 0-20Kx100 0-20Kx1000	
DC mA 0-.6 0-6 0-60 0-600	MA .6 MA 6 MA 60 MA 600	V-O-M V-O-M V-O-M V-O-M	60 ÷ 100 60 ÷ 10 60 60x10	.01 mA .1 mA 1 mA 10 mA

18 RESISTANCE MEASUREMENTS

X1 thru X1K Ohms:

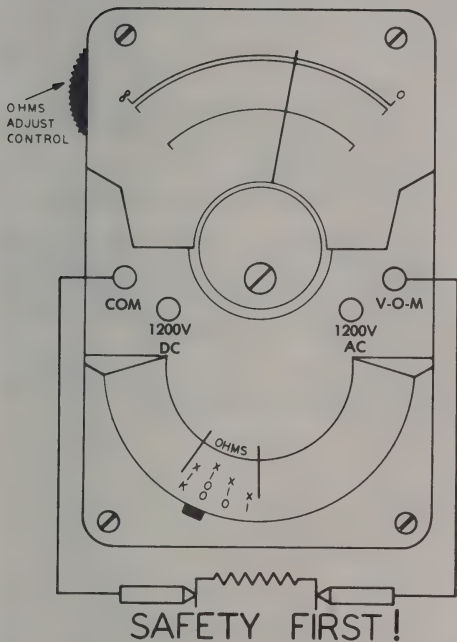
1. Insert test leads into VOM and COM jacks.
2. Set switch to appropriate OHMS range.
3. Short test probes together.
4. Adjust OHMS ADJUST CONTROL until meter reads zero ohms.
5. Connect probes to component to be measured.
6. Read ohms on OHMS scale (multiply value read by multiplier indicated by the switch).

A fuse protects the X1 range against accidental overloads. If the fuse should blow, all OHMS ranges will not operate.

DO NOT TOUCH circuitry while making measurements.

DISCONNECT or **ISOLATE** the device being tested from other circuitry.

NOTE: 1K equals 1000.



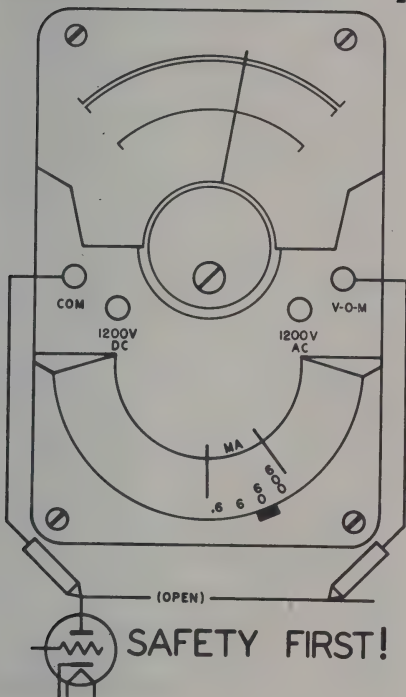
20 DC CURRENT MEASUREMENTS

0-.6 thru 0-600 Millamperes:

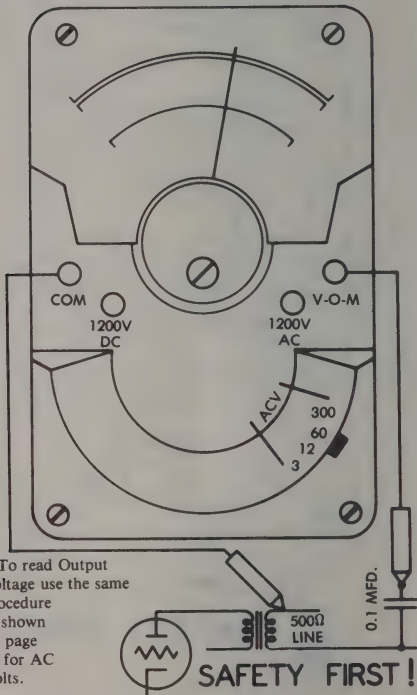
1. Insert test leads into VOM and COM jacks.
2. Set switch to appropriate mA range.
3. Connect the probes in series with the circuit (use alligator clips).
4. Turn circuit on.
5. Read current on black AC-DC scale.

The approximate voltage drop across the Model 310 is shown in the specifications. Generally, this drop will not affect the circuit. But, in low voltage circuits, it may be necessary to compensate for this drop.

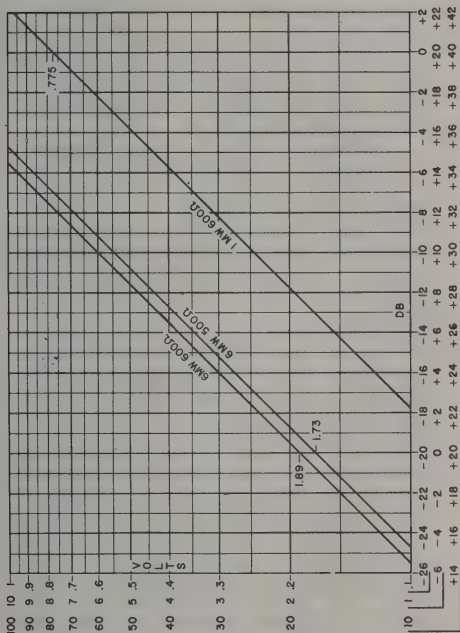
DISCONNECT POWER before connecting the Model 310 into the circuit.



22 MEASURING OUTPUT VOLTS (dB)



MEASURING OUTPUT VOLTS (dB) 23



Battery Replacement

If the pointer cannot be adjusted to full scale on the X1, X10, or X100 OHMS ranges, replace the 1.5 V battery. Replace the 15 V battery if the X1K OHMS range cannot be adjusted for full scale.

1.5V Battery — NEDA 910F or 910M

15V Battery — NEDA 220

Battery Cover Latch Repair

If the slide on the battery cover breaks, order a new battery cover assembly. To repair the tab on the tester body, order the battery cover latch repair kit.

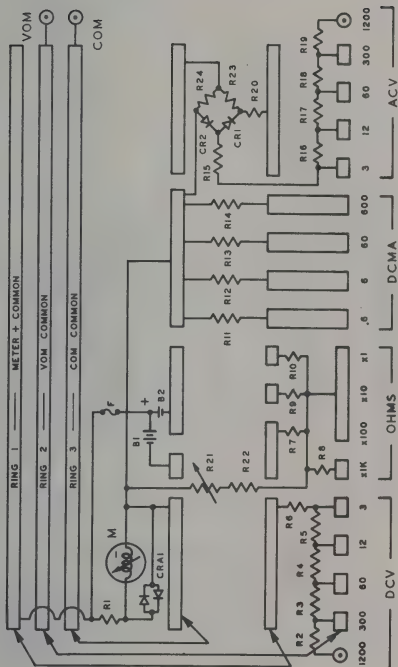
Fuse Replacement

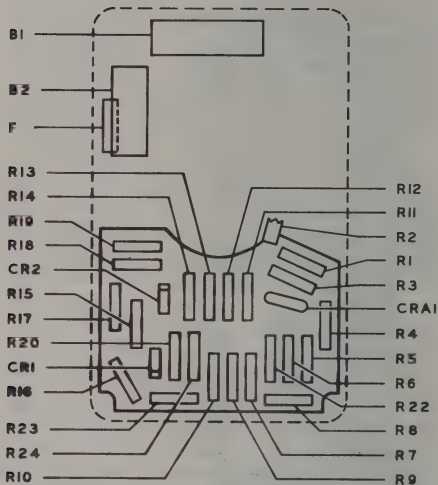
If none of the OHMS ranges work, replace the fuse under the 1.5 V battery. Use a 1/16 AMP 8AG, MKB, or equivalent fuse.

Cleaning Plastic Window

The plastic window has been treated at the factory to dissipate static charges. If cleaning is necessary, use cotton dipped in a solution of common household detergent and water. After cleaning, allow the solution to dry without rubbing; the resultant detergent film will effectively dissipate static charges.

CAUTION: Solvents and liquids used in radio and TV shop work may craze or scar the plastic window if applied to it.





REPAIR OR SERVICE

In the event repair or service is required, please outline the nature of the difficulty. By providing this information, Triplett can supply more efficient service.

REPLACEABLE PARTS LIST MODEL 310 TYPE 5

27

Circuit Symbol	Part Number	Qty. Used	Description
M	52-8184	1	Instrument assembly, pivot & jewel 50 μ A
	10-3116	1	Front assembly
	41-5385	1	Base assembly
	20-718	1	Battery cover assembly
	46-32	1	Contact, battery 1.5V negative
	46-33	1	Contact, battery 15V negative
	46-89	1	Contact, battery positive
	24-776	1	Screw, battery contact retaining
B1	37-22	1	Battery 15 volt (NEDA 220)
B2	37-21	1	Battery 1.5 volt (NEDA 910-F or 910-M)
	87-405	1	P. C. Board with components
	87-250	1	P. C. Board less components
R1	15-C-310	1	Resistor, (Value may vary from 2300 to 3250 Ω)

REPLACEABLE PARTS LIST MODEL 310 TYPE 5

28

Circuit Symbol	Part Number	Qty. Used	Description
R2	15-2593	1	Resistor 18 Meg. 1% 1 watt
R3	15-2436	1	Resistor 4.8 Meg. 1% 1/2 watt
R4	15K-9603TB4	1	Resistor 960kΩ 1% 1/4 watt
R5, R8	15K-1803TA3	2	Resistor 180kΩ 1% 1/8 watt
R6, R7	15K-5502TA3	2	Resistor 55kΩ 1% 1/8 watt
R9	15K-2201TC5	1	Resistor 2.2kΩ 1% 1/2 watt
R10	15K-2000TA3	1	Resistor 200Ω 1% 1/8 watt
R11	15K-4550TB4	1	Resistor 455Ω 1% 1/4 watt
R12	15K-420FTB4	1	Resistor 42Ω 1% 1/4 watt
R13	15-3496	1	Resistor 4.17Ω 1% 3 watts
R14	15-3647	1	Resistor .414Ω 1% 3 watts
R15	15-C-305	1	Resistor (Value may vary from 10.4k to 10.7k)
R16	15K-4502TA3	1	Resistor 45kΩ 1% 1/8 watt
R17	15K-2403TA3	1	Resistor 240kΩ 1% 1/8 watt
R18	15K-1204TB4	1	Resistor 1.2 Meg. 1% 1/4 watt

R19	15-4986	1	Resistor 4.5 Meg. 1% 1/2 watt
R20	15-C-304	1	Resistor (Value may vary from 2.4k to 2.9k)
R21	16-31	1	Resistor, Variable 20k Ω
	65-815	1	Bracket, R21 retaining
	5168	2	Lockwasher, R21 to bracket
	27-83	2	Nut, R21 to bracket
	32-5C	1	Terminal, R21 to circuit
	2434-2-6	1	Screw, R21 bracket & terminal
	5168	1	Lockwasher, R21 bracket & terminal
R22	15K-1502TA3	1	Resistor 15k Ω 1% 1/8 watt
R23, R24	15K-5001TA3	2	Resistor 5k Ω 1% 1/8 watt
CR1, CR2	11056	2	Diode
CRA1	11670	1	Diode assembly
	79-153	1	Test leads, needle point
	79-296	1	Test leads, blunt point
	2250-70	1	Rectifier service kit
F	3207-37	1	Fuse, 1/16 Amp, 8AG, MKB
	12478	1	Lever Assembly
	12317	1	Battery cover latch repair kit
	3206-27	1	Handle, painted

AC CLAMP-ON AMMETER ADAPTER

This adapter allows measurement of AC current with a VOM. It is attached to the VOM with an extension lead. It may also be attached to the top of the 310 series VOMs directly as shown on Page 31.

SPECIFICATIONS

Ranges:

0-6, 12, 30, 60, 120, 300 AC Amperes.

Accuracy:

See Model 10 Instruction Sheet.

Frequency:

See Model 10 Instruction Sheet.

VOM Range and Sensitivity:

3 AC Volts at 5,000 ohms/volt.

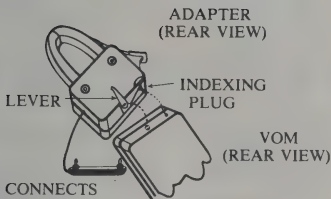
**MODEL 10
ADAPTER**

32 AC CURRENT MEASUREMENTS

Using the adapter on top of Triplett Model 310 series VOMs —

1. Rotate the lever on the bottom of the adapter until it points straight out (See Figure 1).
2. Install the adapter on the top of the VOM. Rotate the lever back against the adapter.
3. Plug the test lead bar from the adapter into the VOM and COM jacks of the VOM. (Polarity of leads is not important).
4. Set the VOM switch to AC AMPS or 3 AC VOLTS.
5. Set the adapter switch to 300 AMPS.
6. Press the handle on the side of the adapter to open the jaws. Place the jaws around ONE conductor and release the handle (See Figure 2).
7. Adjust the adapter switch for maximum meter deflection without going off-scale.
8. Read AC Amperes on the AC AMPS or 3 AC VOLTS scale as directed below.

Adapter Range AC Amperes	Reading on 3 AC VOLTS Scale	Reading on AC AMPS Scale
6	0-3 (x 2)	0-6
12	0-3 (x 4)	0-12
30	0-3 (x 10)	0-30
60	0-3 (x 20)	0-6 (x 10)
120	0-3 (x 40)	0-12 (x 10)
300	0-3 (x 100)	0-30 (x 10)



THIS LEAD CONNECTS
TO THE VOM AND COM
JACKS ON FRONT

FIGURE 1

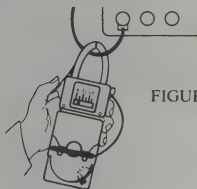


FIGURE 2

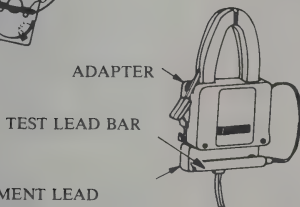


FIGURE 3

34 AC CURRENT MEASUREMENTS

Using the adapter with the attachment lead —

1. Rotate the lever on the bottom of the adapter until it points straight out (See Figure 1).
2. Install the adapter on the top of the attachment lead. Rotate the lever back against the adapter (See Figure 3).
3. Plug test lead bar into attachment lead (See Figure 3).
4. Plug attachment lead into VOM (+) and COM (–) jacks of VOM (polarity of leads is not important).
5. Set the VOM switch to AC AMPS or 3 AC VOLTS.
6. Set the adapter switch to 300 AMPS.
7. Press the handle on the side of the adapter to open the jaws. Place the jaws around ONE conductor and release the handle (See Figure 2).
8. Adjust the adapter switch for maximum meter deflection without going off-scale.
9. Read AC Amperes on the AC AMPS or 3 AC VOLTS scale as directed below.

Adapter Range AC Amperes	Reading on 3 AC VOLTS Scale	Reading on AC AMPS Scale
6	0-3 (x 2)	0-6
12	0-3 (x 4)	0-12
30	0-3 (x 10)	0-30
60	0-3 (x 20)	0-6 (x 10)
120	0-3 (x 40)	0-12 (x 10)
300	0-3 (x 100)	0-30 (x 10)

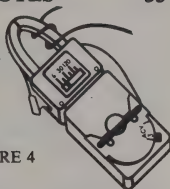


FIGURE 4

Do not place the jaws of the adapter around more than one wire. An incorrect reading will result.

When reading is below half scale on the 6 AC Ampere range, greater accuracy can be achieved by wrapping the conductor around the jaws twice (Figure 4). This would double the sensitivity of the adapter, and the actual current flowing would be half that indicated by the meter. Likewise, more turns can be added around the jaws of the adapter for increased sensitivity. The actual current in each case is the indicated current divided by the number of turns around the jaws.

Best accuracy is obtained by hanging the Model 10 on the single wire conductor.

Do not try to change ranges by changing the switch on the VOM. The adapter is calibrated to work on the AC AMPS or the 3 AC VOLTS ranges only.

The jaw surfaces must be kept clean. If film appears, clean the jaw with a very fine grade of sandpaper.

Inspect test leads before use. Replace any worn, frayed or cracked test leads.

SAFETY FIRST

DO NOT ALLOW TEST LEAD BAR to hang loose. When the adapter is not in use, remove it from the VOM.

FOLLOW ALL SAFETY RULES, PRECAUTIONS, AND WARNINGS in this VOM instruction manual.

LINE SEPARATION ADAPTER

This adapter is used to divide the two-conductor cord so that AC current measurements can be made on equipment with a standard line cord.

It will increase sensitivity and ranges of the Model 310-Model 10 combination by 10 times and 20 times. Also the adapter has provisions for voltmeter prods for voltage measurements.

Uses for Model 101 (With Model 310-10 combination V-O-M, clamp-on ammeter).

Fast checks on current of appliances, home freezers, radios, TV, etc.

Checks for shorts, etc. in home radios, TV sets and other equipment.

Checks on current of motors, starting and running.

Current Capacity of Model 101

Range	Max. Capacity Amperes
Direct	30
Divide by 10	12
Divide by 20	6

38 OPERATING INSTRUCTIONS

Direct Range

For current readings to 30 amperes, on equipment having two-conductor line cords.



FIG. 1

(1) Plug line of cord appliance or apparatus to be measured into the "Direct" outlet of the Model 101 (Fig. 1).

Plug model 101 into wall outlet.

(2) With Model 10 adapter and Model 310 V-O-M connected and set properly for measuring AC current, snap Model 10 through the hole in Model 101 and take readings, starting at the highest current range. (Fig. 2). Reset range switch on Model 10 for greatest pointer deflection.



FIG 2

Model 10 setting AC Amperes	Multiply 3 AC scale reading on 310 by	Full scale reading in AC Amps (Read on 3 AC scale of 310)
30	10	30
12	4	12
6	2	6

Divide by 10 Range

To increase the sensitivity of your Model 10 Adapter 10 times.

OPERATING INSTRUCTIONS (Cont'd.) 39



FIG. 3

(1) Plug line cord of appliance or apparatus to be measured into the "DIVIDE BY 10" outlet of Model 101, (Fig. 3).

(2) With Model 101 plugged into wall outlet, snap Model 10 through Model 101 — take reading and divide by 10.

Model 10 setting AC Amperes	Multiply 3 AC scale reading on 310 by	Full scale reading in AC Amps (Read on 3 AC scale of 310)
120	4.0	12.0
60	2.0	6.0
30	1.0	3.0
12	.4	1.2
6	.2	.6

Divide by 20 Range

To increase the sensitivity of your Model 10 Adapter 20 times.



FIG. 4

(1) Plug line cord of appliance or apparatus to be measured into the "DIVIDE BY 20" outlet of Model 101, (Fig. 4).

(2) With Model 101 plugged into wall outlet, snap Model 10 through Model 101 — take reading and divide by 20.

40 OPERATING INSTRUCTIONS (Cont'd.)

Model 10 setting AC Amperes	Multiply 3 AC scale reading on 310 by	Full scale reading in AC Amps (Read on 3 AC scale of 310)
120	2.0	6.0
60	1.0	3.0
30	.5	1.5
12	.2	.6
6	.1	.3

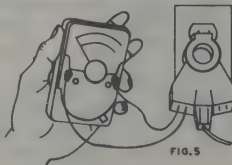
Notes:

(1) Never leave the Model 101 in a circuit carrying more than the capacity rating of the Model 101.

(2) Motors draw a surge current while starting. Therefore, the Model 10 should be set on a high range to avoid overloading the meter when motor starts.

LINE VOLTAGE MEASUREMENTS:

To make line voltage measurements, remove the Model 10 from the 310, and set range switch to 300 ACV range. Use the regular test leads for the 310 and measure line voltage at any unused outlet on the Model 101 adapter. This voltage measurement can then be made while the appliance is under load conditions. (Fig. 5).



The Triplett Corporation warrants instruments and test equipment manufactured by it to be free from defective material or factory workmanship and agrees to repair or replace such products which, under normal use and service, disclose the defect to be the fault of our manufacturing, with no charge for parts and service. If we are unable to repair or replace the product, we will make a refund of the purchase price. Consult the Instruction Manual for instructions regarding the proper use and servicing of instruments and test equipment. Our obligation under this warranty is limited to repairing, replacing or making refund on any instrument or test equipment which proves to be defective within one year from the date of original purchase.

This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence or accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries, not of our manufacture used with this product are not covered by this warranty.

To register a claim under the provisions of this warranty, return the instrument or test

equipment to Triplett Corporation, Bluffton, Ohio 45817, transportation prepaid. Upon our inspection of the product, we will advise you as to the disposition of your claim.

ALL WARRANTIES IMPLIED BY LAW ARE HEREBY LIMITED TO A PERIOD OF ONE YEAR, AND THE PROVISIONS OF THE WARRANTY ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES EXPRESSED OR IMPLIED.

The purchaser agrees to assume all liability for any damages and bodily injury which may result from the use or misuse of the product by the purchaser, his employees, or others, and the remedies provided for in this warranty are expressly in lieu of any other liability Triplett Corporation may have, including incidental or consequential damages.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. No representative of Triplett Corporation or any other person is authorized to extend the liability of Triplett Corporation in connection with the sale of its products beyond the terms hereof.

Triplett Corporation reserves the right to discontinue models at any time, or change specifications, price or design, without notice

44 LIMITED WARRANTY (Cont'd)

and without incurring any obligation.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

TRIPLETT CORPORATION

Bluffton, Ohio 45817

Printed in U. S. A.

84-392A

TRIPLETT CORPORATION
ONE TRIPLETT DRIVE
BLUFFTON, OHIO 45817
TEL. (419) 358-5015
TWX. (810) 490-2400